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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,721	03/29/2004	Jang Hui Cho	1740-000071/US/COA	9356

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EXAMINER

BOCCIO, VINCENT F

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/810,721

Applicant(s)

CHO ET AL.

Examiner

Vincent F. Boccio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on RCE 7/26, Amend & Comm of 6/26/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-19, 21-26, 28-34, 36-42, 44-50 and 52-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 17-19, 21-26, 28-34, 36-42, 44-50 and 52-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/176,364.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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**DETAILED ACTION**

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2621.

***Response to Arguments***

1. Applicant's arguments filed 6/26/06 have been fully considered but they are not persuasive.

After a careful consideration, it seems clear based on applicants, response that an overall overview is necessary to understand the position taken by the primary examiner.

The examiner has maintained the same grounds to clarity and answer the argument, rather than giving new grounds of rejection.

The rejection is maintained by the prior art applied, wherein, Okada {(US 2002/0046328)/WO 00/42515} is the base reference which seems to be overlooked.

Okada WO, teaches such as Fig. 14, recording up to 4 channels to a DISK 66 and also creates navigation data for each, but, fails to particularly teach recording the created management data to the DISK medium.

The examiner deemed it would have been obvious in view of Okada et al. (US 6,181,870) to store this navigation data to the DVD/DISK and the examiner further asserts that the DVD data structures are also taught and further obvious to record stream

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**even 4 in accord to this create Navigation data, such as Fig. 71 etc....., for example in accord to the teachings of Okada.**

Yes, it is understood that Okada '870, only record one channel or stream of data.

The issue is that the base reference teaches recording up to 4 channels to the DISK.

It is obvious and the examiner had thought it to be clear that Okada 'W0, has 4 paths or streams, in view of Okada '870 to record the created management data to the medium.

The combination would teach that 4 channels of data can be recorded and obvious to store the Management or Navigation data to the medium for all paths, based on the combination.

It is noted that the examiner had stated in the last action,

**"As understood, based on the claim language,** a navigation area having navigation data, wherein navigation units referencing another, being separate files or providing pointer information for referencing or pointing to another location of video images.

Further as recited in claim 21-22, having a field indicating whether the at least one of the second navigation units provides navigation information for multiple paths.

The examiner cites, Kikuchi, referring to cols. 21-22", based on the above the examiner has difficulty even in the comprehension of the claims, being so non-specific to what is really being claimed.

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The examiner combined, Kikuchi et al. (US 5,870,523) teaching additional forward and reverse NAVIGATION data for a stream.

It is clear to the examiner that combining the teaching of recording the Navigation data to the medium would have been obvious, also to conform to the data structures of Okada '870, also would have obvious and to also incorporate the coined TRICK PLAY TABLE for forward and reverse trick modes of Kikuchi would also have been obvious for the advantages as stated previously.

The combination is deemed obvious to record Management data to the disk and to include a trick table for trick operations, three references, but is more teachings than is necessary to render a rejection.

Applicant states that the invention is distinguishable in view of and amended to reflect that, "the reproduction paths in the present invention were different paths, being different video data, not the same video data".

In response it seems that the recording of 4 paths, creation of management/navigation, with the teaching of storing on the medium, even conformance of management/navigation data in accord to the teaching and further an additional set of navigation data for trick operations, these combined teachings

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somehow as a whole have been ignored, which are each required to be addressed in combination.

The examiner does not agree after a careful consideration of the prior art applied and the amended claims that somehow the claims are distinguishable, rather the claims are deemed to be broad and also unclear.

Applicant has not addressed the combination of prior art applied, but has chosen to focus on one reference in the combination, Kikuchi's, in response.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The examiner renders obvious the combination, first to record multiple streams to a DISK and to combine the teachings of recording management to the DISK, and further even conform to and utilize the teachings of the data structures of management data for all streams, of the cited teachings of the two secondary references, as applied.

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**Claim Rejections - 35 USC § 103**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claim 17-19 and 21-26, 28-34, 36-42, 44-50, 52-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Okada {(US 2002/0046328)/WO 00/42515}, and Okada et al.(US 6,181,870) in further view of Kikuchi et al. (US 5,870,523).

The same grounds have been maintained to answer the arguments against the combination as applied.

Regarding claims 17-19, Okada meets the limitations associated with record medium, recording & reproduction apparatus and methods having a data structure for managing reproduction of at least video data representing multiple reproduction paths,

A RECORD MEDIUM, comprising:

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- a data area storing a transport stream of at least video data (Fig. 4, "TRANSPORT Packet of MPEG", "188 bytes", therefore an MPEG transport stream to be recorded to Fig. 5 DVD and Fig. 6, recording in logical zones, transferred to the DVD media thru a 1394 bus, "Isochronous Data Transfer", mode);
- the transport stream being divided transport packets (MPEG TRANSPORT STREAM IS IN PACKETS & SEE Fig. 4, "packets" or blocks, dummy packet, IEEE 1394);
- wherein each of the packets can be associated with one of the multiple paths (streams of data in packets, Fig. 14, multiple channels, recording packets); and
- the transport packets of each path being stored in separate physical domains of the data area from one another (such as shown in Fig. 37, zones 1, 6, 2 zone per/channel, channels 1, 3 and 4).

Okada discloses a navigation data (Figs. 41-44), including a map {by zone Fig. 37}, for each path (represented by channels 1, 2, 3, 4 etc.....) and position information (Fig. 42, has at least the leading address for each zone, while Fig. 37, shows zone recording for each channel), for the video of each path, wherein the navigation area includes navigation data item/items, the data items providing NAV. Info., for reproducing each path, having a list of at least the navigation data item/items (various data lists of Figs. 41-44 etc....., necessary to locate the digitally recorded video etc....., for reproduction), wherein in accord to Fig. 37 each path can be represented by a zone number or not, also the path is also defined by Fig. 44, stream Ids, and/or zones numbers and addresses, in accord to Fig. 42, leader addresses, wherein the Path defined by stream number Ids Fig. 41, or even zone numbers per/channel Fig. 37, represents a digital channel being a sub-channel of an RF channel received to the recording system (see SET TOP BOX, receiving a multi-channel stream (pages 1-2, MPEG 2, "programs of several hundred channels", "SET TOP BOX", Fig. 12).



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Regarding amended claims 17-19, 21-22, 26, 34, 42, 50 have been analyzed and disclosed with respect to the data structure above and the examiner incorporates by reference the last action details against the claims with respect to the same or similar limitations as re-recited in the new claims,

but, as amended the recited claims recite an additional limitation such as

o wherein in a navigation area having navigation units a first unit including one or more second units, controlling a reproduction order, at least one second referencing more than one third unit/units, wherein each third unit is a separate file of video data in the data area to reproduce.

As understood, based on the claim language, a navigation area having navigation data, wherein navigation units referencing another, being separate files or providing pointer information for referencing or pointing to another location of video images.

Further as recited in claim 21-22, having a field indicating whether the at least one of the second navigation units provides navigation information for multiple paths.

The examiner cites, Kikuchi, referring to cols. 21-22,

Col. 22, lines 25-26,

"NAV pack (NAV\_PCK) 86 in which DSI data 11 is recorded"  
and

col. 21, lines 49-51,

"(VOBU) 85 containing the DSI as shown in Fig. 35 A"

Fig. 35 A, shows a table being DSI data recorded in each Nav. Pack of each VOB having a NAV pack header 86 shown in Fig. 25, DSI area 115 of NAV pack 86, further based on Fig. 35 A & 35 B,, shows V\_FWD\_Exist 1 ....., as well as Fig. 35 C, showing V\_BWD\_Exist 1 ....., which reads on and meets the limitation of a field indicating referencing of files either in the forward or reverse reproduction paths, as well as a plurality as shown in Fig. 35 per navigation DSI data fields, as taught by Kikuchi, this search information col. 20, line 66 to col. 23-, used for identifying locations by using addresses in the order of forward and backward playback operations, using this information to perform fast playback operations, col. 1, lines 45-, as taught.

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Therefore, it would have been obvious to those skilled in the art at the time of the invention modify the combination by providing a table in navigation areas to providing multiple addresses per navigation area and indicating information of whether units exist, therefore an address to a file or image or not, to use during a forward or reverse search operation to files, being images to perform fast reproduction operations, as taught by Kikuchi.

Regarding claims 24-25, recite as recited in cancelled claims 7-8, met by the art as applied.

Claim 42 is analyzed and discussed with respect to the claims above, but, further recites a **driver** for driving an optical recording device, controller controlling the driver (Fig. 12, shows a driver circuit 63, which is controlled by the "MPU For Disk Access Control, thru the Bus 65), deemed to read on the claimed driver limitation, for driving the optical device in recording as well as reproduction.

Okada {WO}, discloses and reads on the claim language as claimed, but having data corresponding to the claimed, "navigation information, the navigation information including paths, wherein the map provides position information for paths",

but, fails to disclose, wherein the medium,

- has a navigation area storing navigation information, the navigation information including paths, wherein the map provides position information for paths on the medium.

Okada teaches in Fig. 16-17, recording to DVD Ram, having path or navigation information in the DVD, Fig. 70 A, with corresponding map providing position data, Fig. 71, "TIME MAP TABLE", cells to MAP to ADDRESS, on the medium, Fig. 70 A, wherein this information since on a DVD RAM can be edited to user defined chains if desired Fig. 70A, as taught by Okada.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Okada (WO 00/42515) by providing navigation data generated for the multiple paths of Okada (WO), to the medium, as taught by Okada (6,181,870) to the DVD RAM, allowing for editing of the navigation information, wherein the media by having the navigation recorded thereto,

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allows for transport of the media to other players, such as the conventional Table of Contents, which allows for players to play the medium only with the medium by having the navigation data for the recorded information on the medium, as taught by Okada, wherein editing can also be done with the originally recorded navigation and map information and to record that data, wherein the originals can be edited and user defined can further, be stored, as taught by Okada (US 6,181,870).

Regarding new claims 18-19, based on the combination as applied, renders further obvious having first, second, third type of navigation units wherein the units can be or are associated with different paths, wherein the third and second when simultaneously recording two can be equal, wherein the Map/Maps provide position data for the video, associated with paths or different channels, chains, maps for recordings, deemed met by the combination as applied.

Claims 23, 28-33, 36-41, 49, 52-57 are deemed analyzed and discussed with respect to the last detailed action incorporated by reference, wherein the claims are related as being method and apparatus for recording to the medium, having the recited data structure and method and apparatus to reproduce the medium, deemed met and obvious in view of the art as applied.

#### **Conclusion**

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### **Contact Fax Information**

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Any response to this action should be faxed to:

(571) 273-8300, for communication as intended for entry,  
this Central Fax Number as of 7/15/05

**Contact Information**

Any inquiry concerning this communication or earlier  
communications should be directed to the examiner of  
record, Monday-Tuesday & Thursday-Friday, 8:00 AM to 5:00  
PM Vincent F. Boccio (571) 272-7373.

Primary Examiner, Boccio, Vincent  
10/1/06

  
VINCENT BOCCIO  
PRIMARY EXAMINER